

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (currently amended) A method for reducing the evolution of hydrogen sulfide vapors within a sanitary sewer system, comprising the steps of:
 - (a) adding an iron salt to a wastewater stream within said sanitary sewer system upstream of hydrogen sulfide volatilization to produce free iron ions which react with said hydrogen sulfide to form iron (II) sulfide; and
 - (b) adding deliberately an oxidant to said wastewater stream downstream of said iron salt addition to regenerate free iron ions from said iron (II) sulfide;
wherein, in said method, no nitrate ion is added to said wastewater stream
2. (original) The method of claim 1 wherein said oxidant is hydrogen peroxide.
3. (original) The method of claim 1 wherein said iron salt is selected from the group consisting of ferrous chloride, ferrous sulfate, ferric chloride, ferric sulfate, and mixtures thereof.
4. (original) The method of claim 1 wherein said regenerated free iron ions are ferric ions.
5. (Currently amended) The method of claim 1, further comprising the step of A method for reducing the evolution of hydrogen sulfide vapors within a sanitary sewer system, comprising the steps of:
 - (a) adding an iron salt to a wastewater stream within said sanitary sewer system upstream of hydrogen sulfide volatilization to produce free iron ions which react with said hydrogen sulfide to form iron (II) sulfide;
 - (b) adding deliberately an oxidant to said wastewater stream downstream of said iron salt addition to regenerate free iron ions from said iron (II) sulfide; and
 - (c) adding an anionic polyelectrolyte to said wastewater stream at said wastewater treatment plant.

6. (Previously presented) A method of enhancing solids separation in a primary clarifier comprising:

(a) adding an iron salt to a wastewater stream in a wastewater collection system upstream of hydrogen sulfide volatilization to produce free iron ions which react with said hydrogen sulfide to form iron (II) sulfide;

(b) adding deliberately an oxidant to said wastewater stream downstream of said iron salt addition to regenerate free iron ions from said iron (II) sulfide, which free iron ions react with said hydrogen sulfide to reform iron (II) sulfide; and

(c) adding deliberately an oxidant to said wastewater stream at the inlet of a wastewater treatment plant prior to entry of said wastewater to said primary clarifier.

7. (Previously presented) A method of treating wastewater at a wastewater treatment plant comprising:

(a) adding an iron salt to a wastewater stream in a wastewater collection system upstream of hydrogen sulfide volatilization to produce free iron ions which react with said hydrogen sulfide to form iron (II) sulfide;

(b) adding deliberately an oxidant to said wastewater stream downstream of said iron salt addition to regenerate free iron ions from said iron (II) sulfide, which free iron ions react with said hydrogen sulfide to reform iron (II) sulfide; and

(c) adding deliberately an oxidant to said wastewater stream at the inlet of a wastewater treatment plant to regenerate free iron ions from said reformed iron (II) sulfide.

8. (canceled)

9. (Previously presented) The method according to claim 1, further comprising the step of:

(c) adding deliberately an oxidant to said wastewater stream downstream of said oxidant addition step (b),

wherein the oxidant of step (c) may be the same oxidant as the oxidant of step (b) or may be a different oxidant than the oxidant of step (b).

10. (canceled)

11. (original) The method of claim 2 wherein said hydrogen peroxide is added to said wastewater stream in an amount of at least 1.0 lbs H₂O₂ per pound sulfide controlled.

12-13. (canceled)

14. (Previously presented) The method of claim 9, wherein said oxidant addition of step (c) occurs at or upstream of a wastewater treatment plant.

15. (Previously presented) The method of claim 1, wherein said oxidant is added to said wastewater stream in a stoichiometric amount of oxidant per pound sulfide controlled.

16. (Previously presented) The method of claim 2, wherein said hydrogen peroxide is added to said wastewater stream in a stoichiometric amount of oxidant per pound sulfide controlled.

17-18. (Canceled)

19. (Previously presented) The method of claim 6 wherein said oxidant is hydrogen peroxide.

20. (Previously presented) The method of claim 7 wherein said oxidant is hydrogen peroxide.